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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,959	12/15/2003	Myung Chul Song	2060-3-88	4462

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EXAMINER	
ABDI, AMARA	

ART UNIT	PAPER NUMBER
2624	

NOTIFICATION DATE	DELIVERY MODE
01/08/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/736,959	SONG ET AL.	
	Examiner	Art Unit	
	Amara Abdi	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,15 and 16* is/are pending in the application.

4a) Of the above claim(s) *11-14* is/are withdrawn from consideration.

5)☒ Claim(s) *10* is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☒ Claim(s) *8,9,15 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's response to the last office action, filed October 15, 2007 has been entered and made of record.

2. Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-2, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pittel (US 7,257,255) in view of Okumura (US 5,878,156).

(1) Regarding claims 1 and 7:

Pittel teaches a mobile communication terminal (cellular phone) (12 in Fig. 1, col. 1, lines 22-23, and col. 3, lines 58), and method comprising:

a photographic apparatus (digital camera) connected to the terminal (14 in Fig. 1, col. 3, lines 3-4 and lines 58-59);

an image processing unit for processing images produced by the photographic apparatus (col. 3, lines 6-7), wherein control information is developed responsive to movement occurring in the images (communication of the hand motion) (col. 3, lines 7-8); and

an operational controlling unit for corresponding an operational function of the terminal to the control information (controlling the information based on the hand motion) (col. 2, lines 15-17);

Pittel do not teach explicitly wherein a first image is produced from an object having a first and second categorical features and a second image is produced from the object of the first image, such that a first value is attribute to a first midpoint of the first categorical feature and a second value is attribute to the second categorical feature.

Okumura, teaches a detection of the open/closed state of eyes based on analysis of relation between eye and eyebrow images in input face images, wherein a first image (rectangular face-image template) is produced (10 in Fig. 4, col. 6, lines 34-36) from an object (face image) (9 in Fig. 3, col. 6, lines) having a first (eyes) and second categorical features (eye brow) (as shown in Fig. 4, the rectangular face-image template has an eyes and eyebrow) (col. 6, lines 30-46) and a second image (eye brow) is produced from the object of the first image(face image) (15 in Fig. 8) (col. 7, lines 18-19), such that a first value (the center value x) is attribute to a first midpoint (centroid) of the first categorical feature (eye) (Fig. 9, lines 28-42) and a second value (eyebrow centroid) is attribute to the second categorical feature (eyebrow) (col. 11, lines 41-44).

It is desirable to detect the open or closed state of an aye at higher precision. The Okumura's approach, where attributing a value to a midpoint of the eyes is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Okumura teaching, where attributing a

value to a midpoint of the eyes, with the Pittel teaching, because such combination detects the open or closed state of an aye at higher precision (col. 3, lines 10-12).

(2) Regarding claim 2:

The combination Pittel and Okumura teaches the parental claim 1. Furthermore, Okumura teaches the comparing of at least one initialization value (the measured distance between the centroid) with at least one corresponding value from the control information (reference distance of the threshold) (col. 7, lines 59-61).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pittel and Okumura, as applied to claim 2 above, and further in view of Hama (US-PGPUB 2004/0242280)

The combination Pittel and Okumura teaches the parental claim 2. However, the combination do not teach the system, where the user sets the initialization value.

Hama, in analogous environment, teaches a communication terminal system, where the user sets the value of the upper limit for the length of space character sequence (initialization value) (paragraph [0050], lines 1-3).

It is desirable to have a system, where the receiver of the message is able to easily read the message without experiencing inconvenience such as having to frequently scroll the display. The Hama's approach, where the user sets the value of the upper limit for the length of space character sequence is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Hama's teaching, where the user sets the value of the upper limit

for the length of space character sequence, with the combination Pittel and Okumura, because such in feature the receiver of the message is able to easily read the message without experiencing inconvenience such as having to frequently scroll the display (paragraph [0005]).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pittel and Okumura, as applied to claim 2 above, and further in view of Lee et al. (US 6,542,625).

The combination Pittel and Okumura teaches the parental claim 2. However, the combination Pittel and Okumura do not teach explicitly the detecting of first difference between the at least one initialization value and the at least one corresponding value.

Lee et al., in analogous environment, teach a method of detection a specific objects in an image signal, where detecting a difference between the gray value of certain pixel in frame at time t (one initialization value), and the gray value of a corresponding pixel of the same position at time t' (one corresponding value).

It is desirable to detect a specific object in an image signal, both efficiently and accurately. The Lee's approach, where detecting the difference between two values is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Lee et al. teaching, where detecting the difference between two values, with the combination Pittel and Okumura, because such feature detects a specific object in an image signal, both efficiently and accurately (col. 2, lines 10-12).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pittel, Okumura, Lee et al., as applied to claim 4 above, and further in view of Alvarez (US-PGPUB 2004/0012722).

The combination Pittel, Okumura, Lee et al. teaches the parental claim 4. However, the combination Pittel, Okumura, Lee et al. does not teach the at least one corresponding value processed from the image.

Alvarez, teaches the system, where a motion detector responsive to differences between the first values (initialization value) and pixel second values processed by the apparatus (corresponding value processed from the image) (paragraph [0007], lines 6-12).

It is desirable to have the motion detection that is simpler and as effective as implementation using block motion estimation. The Alvarez's approach, where the system comprises the difference between values and there corresponding values processed by an apparatus is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Alvarez teaching, where the system comprises the difference between values and there corresponding values processed by an apparatus, with the combination Pittel, Okumura, Lee et al., because such feature has the motion detection that is simpler and as effective as implementation using block motion estimation (paragraph [0088]).

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pittel, Okumura, Lee et al., and Alvarez, as applied to claim 5 above, and further in view of Liljegren (US 6,230,032).

The combination Pittel, Okumura, Lee et al., and Alvarez teaches the parental claim 5. However, the combination Pittel, Okumura, Lee et al., and Alvarez do not teach explicitly the system, wherein the user sets a first operational function of the terminal to correspond to the first difference.

Liljegren teaches the system, where the user sets a first operational function (operation "YES") of the terminal to correspond to the first difference (difference between references values) (col. 10, lines 55-63).

It is desirable to have an easy and economic system to implement in a terminal having many other functions. The Liljegren's approach, where the user sets a function "yes" to correspond to the difference between reference value is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Liljegren teaching, with the combination Pittel, Okumura, Lee et al., and Alvarez, because such feature has an easy and economic system to implement in a terminal having many other functions (col. 4, lines 12-13).

Allowable Subject Matter

9. Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Independent claim 10 is allowable over the prior art of record.

Claims 15, and 16 depend from claim 10, therefore, are allowable.

Independent claim 10, recites the limitation of:

"wherein the producing the second image further comprises:

attributing a first value to a first midpoint located between the eyes

attributing a second value to a second midpoint located between a pair of shoulders,

attributing a first comprehensive value to a vector drawn through the first and second midpoint; and

attributing a second comprehensive value to an angle formed by the vector and a horizontal line joining the shoulders".

The combination of these features as cited in the claims with other limitations of the claims, are neither disclosed nor suggested by the prior art of record.

The closest reference of US-PGPUB 2003/0063778 to Rowe et al. discloses a method for operating a mobile communication terminal. However, this reference either by itself or by combination with other references does not teach the above recited limitations.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information:

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571)270-1670. The examiner can normally be reached on Monday through Friday 8:00 Am to 4:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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